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Minor repairs are performed by organic personnel in using units. Major repairs including the replacement of sub-assemblies are performed in shops at Division level. Repairs beyond the scope of Division shops are performed in the shops attached to Corps and Field Armies. To obtain repairs to a tank radio, for example, the radio operator reports the nature of the trouble to his tank commander; the tank commander then makes a verbal report to the company commander, who in turn makes a written report to the chief of communications of the next higher unit. The chief of communications then makes a decision as to the manner in which the repairs should be made. When communications equipment is placed in storage it is sealed to prevent its unauthorized use; this precaution is taken to prevent troops from listening to VOF, BBC, etc.

6.

Enlisted operator personnel and other non-technical personnel are trained in line units. This unit training has no special length; it runs through the first three-year enlistment. Technicians are trained in special schools in signal regiments, and then returned to their units. Training of personnel is well-rounded, with approximately 1/3 of the time spent in specialist training and 2/3 of the time spent in general military and political training. Training received in the Red Army is very important in that it also serves as a vocational training for personnel when they are released from the service.

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7.

The main Communications School for officers of the Soviet Army is located in Leningrad. During the three-year course, students hold the rank of Cadet and upon graduation they are commissioned as Junior Lieutenants or Lieutenants, depending on their standing in the class. In order to be commissioned, personnel must be regarded as politically reliable. Commissions are in the Regular Army and officers remain on active duty until they reach the age of 60 or have had 25 years of service. Enlisted personnel of the Regular Army who have attended specialist schools are subject to the same regulations.

8.

Communications in the Soviet Army are considered adequate, and the Service of Communications enjoys general respect among the troops. In addition, the importance of communications within any organization is enhanced because they are the direct personal responsibility of the Chief of Staff of that organization.

9.

In the Soviet Army, communications are considered as indispensable to the proper functioning of a military unit as the Staff. In a tactical unit the Chief of Communications functions directly under the Chief of Staff, the latter having responsibility for communications within his unit. The communications organizations normally found within tactical units of the Soviet Army are as follows:

Army	Communications Regiment
Corps	2 or 3 Communications Battalions
Division	Communications Battalions
Regiment	Communications Company (War-time basis)
	Communications Platoon (Peace-time basis)
Battalion	Communications Platoon (War-time basis)
	Communications Squad (Peace-time basis)

In peace-time, battalions and higher echelons use very little radio and a maximum amount of civil wire facilities. For this reason, the size of the communications establishment is reduced. Responsibility for communications is from the major unit to its subordinate and also to maintain liaison with the unit on its right.

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[redacted] employment of radio in armored divisions.

Radio nets for command purposes in armored divisions, regiments and battalions exist and are manned in standby conditions at all times. A strict radio silence is maintained except during actual or simulated combat conditions. Administrative radio nets are not found in Divisions and lower echelons of the Soviet Army. Command nets at company and platoon level in armored divisions are operated under conditions similar to nets in the higher echelons although they are more often used because of the difficulty of maintaining wire contact with individual tanks and small elements. Reconnaissance and aircraft warning radio nets are not used; in the case of reconnaissance elements, strict radio silence is normally maintained although in case of emergency normal command channels may be utilized.

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The bulk of electrical communications within a Soviet Armored Division is handled over wire lines, with teletype used from Divisions up. Maximum utilization is made of existing civil facilities. Communication by radio is authorized only during advances or emergencies, while communication by wire is used at other times in static and in combat situations and during planned withdrawals. The Soviet Army emphasizes the lack of security of wire communications and prohibits the transmission of messages in the clear. The destruction of telephone lines by vehicular traffic is recognized as a serious problem, but no special preventive means are taken other than the occasional burying of lines in critical areas.

12.

Each headquarters has enlisted messenger service available 24 hours daily. Messengers are occasionally used from small isolated positions in preference to radio when wire cannot be laid. Officer couriers are used to carry important messages. Electrical cryptographic equipment does not exist at division level; all enciphering is done manually by double transposition methods. Signal lights, colored flares, and panels are sometimes used to fill particular requirements.

13.

Liaison aircraft are used by the Soviet Army only in special situations. Air-ground liaison radio nets can be set up for artillery spotting and for attack bombing but are not generally used. The main communication between aircraft and ground is by prearranged rocket and panel signals. Pick-up and drop messages are not used.

14.

Infantry troops maintain liaison with tanks by visual signals including tracer bullets. Connections for external telephones are probably not available on tanks.

15.

[redacted] the Soviet equivalent of Signal Operations Instructions [redacted]

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The name by which Signal Operations Instructions are known in the Soviet Army is Combat Communication Orders (БОЕВЫЕ ПРИКАЗЫ СВЯЗИ). These are issued by the Chief of Staff and bear the security classification of SECRET.

16.

Attached to each communications regiment (one to each Field Army) is a unit charged with radio countermeasures. This unit is composed of military personnel but operates under political direction. These units are equipped with transmitters to jam enemy radio transmissions and they also have radio direction-finding equipment to locate enemy transmitters and also the source of enemy jamming. Information obtained concerning the location of enemy jamming equipment is transmitted to artillery or aircraft units for suitable action. Defense against enemy jamming consists merely of refinement of operator techniques. No special procedures are used. The commanding officer of the jamming unit has a special code book issued by Military District Headquarters; this code book is separate from that issued by the Division Security Section. On one occasion, the commanding officer of the jamming unit referred solely to this special code book when contacting by radio an airplane flying overhead.

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The radio equipment used in Type T-34 tanks is the Type RB-70. Plate voltage supply is from EAS-60 batteries. During the summer of 1951, this equipment was replaced with new equipment. The details on the new equipment are not known. Radio equipment used in the Type JS-3 tank is not known.

18.

No night driving or night gunnery devices are known to exist. There are not even any rumors of their future appearance in tactical organizations in Eastern Germany. There are, however, rumors among Soviet personnel that Americans possess these items. Night movement by Soviet tanks is extremely limited. In cases of absolute necessity, tanks move short distances over prearranged routes or follow personnel on foot.

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19.

The only radar found in armored units of the Soviet Army in Eastern Germany is a single, early warning type radar assigned each division in sensitive border areas; this radar is operated by military personnel but is under political control. Other divisions have no radar at all. No radar fire control devices for tanks are known to exist.

20.

No unusual radio antenna equipment was noted near division command positions, aside from the usual whip and flat-top antennas.

21.

Soviet policy is to utilize civil wire communications to the greatest extent possible. During peace-time, pole line construction is used as far down as regimental headquarters, with field wire below. During war-time, pole line construction is used when available. Light pine poles are used extensively for the construction of temporary open wire telephone lines. Very little cable is used for telephones. Lead or jute-covered cable is used for telegraph and for telephone to connect switchboards to the open wire pole line. Military carrier telephone systems permit the transmission of 12 conversations on each pair of telephone lines. Each division headquarters uses three or four Type PK-30 switchboards.

22.

The TAI-43 is the standard field telephone in use in the Soviet Army. In performance it is approximately the same as the American Type EE-8-A. Phonetic type telephones are in current use, as is the Type UNA-I-31. The Type PIN-6 switchboard is obsolete and is no longer used. In radio equipment, the RB-45, the RB-70 are in current use - these are both World War II pieces of equipment. The Type SAK-1-M, the GPK, and the RRU radios are obsolete and no longer used. New sets to replace the RB-70 are in the hands of troops, but no information on them is available.

23.

The significance of the ST number found on name plates is merely that it is a specification or procurement number. ST is the abbreviation of the Russian word for standard. In case parts for equipment are subcontracted they are identified only by the "ST" number thereby eliminating reference to the equipment type number. This is used for accounting convenience and also for security reasons.

24.

In general, no new equipment has been seen, nor are there any rumors that troops are to be provided with any equipment in the near future.

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Underground telephone cables are used in the USSR both in larger cities and on trunk lines between large cities. One such cable is under construction between Moscow and Khabarovsk, Siberia. There is considerable construction activity in the USSR in the installation of additional underground telephone cable. Ceramic tiles are used to protect cables when laid underground.

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German-type dial telephones and exchanges are found only in metropolitan areas. Smaller cities use common battery switchboards. There are a few local battery switchboards remaining but these are being converted to common battery operation. Open wire telephone lines employ copper wire. Carrier is used on long distance civil telephone circuits and can transmit up to 18 conversations per circuit. The quality of long distance conversations between major cities is variable although generally very good. To outlying areas and to satellite countries, the quality is sometimes very poor and is, in general, not good. Long distance telephone calls may be placed from public long distance telephone stations; certain important individuals may place long distance telephone calls from their homes.

Important military radio stations are located in the following places: 15 kilometers south of Leningrad, at Sosnevyaya Polyana (СОСНОВАЯ ПОЛЯНА); it may be reached by taking car #22 directly in front of the Kazan Cathedral and riding to the end of the line. This radio station is guarded by 16 men on a three-shift basis. Another major station is located seven kilometers from Minsk. Another one is located near the city of Kiev opposite the Dnieper River. A fourth large radio station is located in Brest-Litovsk at the corner of Karl Marx and Dzerzhinsky. The only antennas seen in the vicinity of these radio stations have been conventional rhombic and flat top antennas.

All communications facilities, railroads, bridges, tunnels, factories, etc. are guarded in the USSR. Radio stations, because of their extreme importance, are generally guarded by cadets from military schools. Cadets are used because they are considered the most reliable of all personnel. Telephone exchanges are guarded by militia and ordinary watchmen. Guarding of important installations is considered a part of cadet training, and all cadets serve some time at this work.

Any person in the USSR may own a radio receiver; all such receivers, however, must be registered with the Post Office. Most officers own a radio receiver; not all do, however, because they are relatively quite expensive. An estimated 15-20% of the population of the USSR owns radio receivers and nearly all of these people at some time or another listen to Voice of America or BBC broadcasts. Any music programs may be listened to without penalty, but severe penalties are given to those people caught listening to other types of programs. In general, transmissions in languages other than Russian are not jammed, although jamming occurs on English language programs given at dictation speed. The system of wired loudspeakers is widely used throughout the USSR; an estimated 70% of the population are exposed to them in the course of their normal daily activities. They are located on the streets, in homes, stores, factories, etc. The programs presented over the loudspeaker systems are mostly music and political indoctrination and are always at a high volume level. A major percentage of the Russian people are tired of the constant propaganda pounding, and resent the presence of these speakers even though nothing can be done about it. A system of wired loudspeakers is also present in the Army with receivers operating at division headquarters and loudspeakers down to company areas.

The listening to broadcasts of the Voice of America and BBC by Soviet communications personnel constitutes a definite security problem in the Soviet Army. Apparently the practice is almost universal, and it continues despite strenuous efforts to stop it. Soviet field and tank radio sets can tune frequencies used by VOA and BBC, and operators often turn their sets to listen to these programs. Reception is generally fairly good and the content of these broadcasts is widely disseminated.

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